1	2	3	4	5	6	7	8		
a	a	a	a	a	a	a	a	a	a
b	b	b	b	b	b	b	b	b	b
c	c	c	c	c	c	c	c	c	c
d	d	d	d	d	d	d	d	d	d

11	12	13	14	15	16	17	18	19	20
a	a	a	a	a	a	a	a	a	a
b	b	b	b	b	b	b	b	b	b
c	c	c	c	c	c	c	c	c	c
d	d	d	d	d	d	d	d	d	d

21	22	23	24	25	26	27	28	29	30
a	a	a	a	a	a	a	a	a	a
b	b	b	b	b	b	b	b	b	
c	c	c	c	c	c	c	c	c	
d	d	d	d	d	d	d	d	d	

1. Which of the following component is used to execute a java program'
   a. JTM
   b. JIT
   c. JKI
   d. JVM

2. Which variable type would you use for storing the area of a circle?
   a. int
   b. char
   c. double
   d. string

3. In _____, the program tests the loop-continuation condition loop, before executing the loop's body; if the condition is false, t
   a. while loop
   b. for loop
   c. do-while loop
   d. if statement

4. What is the output of the following snipped code?

```
String var = 5<=1 ? "No" : "Yes";
System.out.println(var);
```

a. Yes
b. No
c. Yes: No
d. Syntax error

5. Which of the following is the correct syntax for

a.
```
if (x < 10) { size = "Small";
else (x < 20) { size = "Medi
```

b.
```
if (x < 10); { size = "Smal
else (x < 20) { size = "Med
```

c.
```
if (x < 10) { size = "Small
else { size = "Medium"; }
```

d.
```
if { size = "Small"; }
else (x < 20) { size = "
```

b. if (x < 10)
else (x < 20) { size = "Small"; }

c. if (x < 10) { size = "Small"; }
else { size = "Medium"; }

d. if (size = "Small";)
else (x < 20) { size = "Mediu

6. What is the extension of java source code files?
   a. .js
   b. .txt
   c. .class
   d. .java

7. Which of the following option leads to the po
   a. Bytecode is executed by JVM
   b. The applet makes the Java code secure a
   c. Use of exception handling
   d. Dynamic binding between objects

8. The role of the _____ is to convert early assembly-langua machine language at computer speeds.
   a. Assembler
   b. Interpreter
   c. Compiler
   d. Circuitry

9. If a loop exists inside the body of another loop, it's called a _____
   a. Static loop
   b. Nested loop
   c. do-while loop
   d. Dynamic loop

10. _____ is an informal description of an algorithm.
   a. Object
   b. Pseudocode
   c. Compiler
   d. Parameter

11. In a `switch` statement, if a `break` statement is missing,
   a. The break happens at the end of each branch by default
   b. The statement will not compile
   c. Execution falls through the next branch until a break st
   d. The default case is automatically executed

12. Identify the error, if any, in the following statements?

```
if(true)
  System.out.println();
```

   a. A semicolon is missing in the first line.
   b. The `println()` method must have input param
   c. The body of the `if` statement must be surrounde
   d. There is no mistake in this statement.

13. Assuming that the user provides 303 as input, what code?

```
int x;
int y;
Scanner in = new Scanner(Sys
System.out.print("Please ent
```

```
        x = y;
    }
else
    {
     x = 0;
    }
  System.out.println("x: " + x);
```

a. x: 300
b. x: 303
c. x: 0
d. There is no output due to compilation errors.

14. _____ is the routine process of locating and removi abnormalities from programs.
a. Editing
b. Debugging
c. Refactoring
d. Designing

15. _____ is a location in the computer's memory where a v later in a program.
a. A variable
b. A class
c. A method
d. A package

16. Which one of the following is a package name in java?
a. java
b. java.util.Scanner
c. java.util
d. java.util.Random

17. When the number of iterations is fixed, it is recomm
a. while loop
b. for loop
c. do-while loop
d. if statement

18. How many times does the following for loop execute?

```
for (int i=1; i<=5; i=i+2)
    System.out.println(i * i);
```

a. 3 times
b. 4 times
c. 5 times
d. Infinite loop

19. When executed in a while, for, do...while or switch, the _____ ca immediate exit from that statement.

a. break Statement
b. watch point
c. continue Statement
d. static Statement

20. _____enable the programmer to form more complex conditions by co simple conditions.

a. Logical operator
b. Arithmetic operator
c. Static operator
d. Dynamic operator

21. Which of the following is **not** a valid identifier?

a. my1Identifier
b. my-Identifier
c. my_Identifier
d. my$Identifier

22. in java, an integer (int) is stored in _____ bits.

a. 4
b. 8
c. 16
d. 32

23. Which of the following statement is used to declare an unchangeable integer?

a. final constant int a = 10;
b. int a =10;
c. constant int a = 10;
d. final int a = 10;

24. What is the output of the following snipped code?

```
int a = 10, b = 3;
System.out.println(a/b + "_" + a%b);
```

a. 3.33-0
b. 3.33-1
c. 3-0
d. 3-1

25. What is the output of the following snipped code?

```
int x = 5;
int y = 3;
System.out.println(x == y);
```

a. 3 == 5
b. x == y
c. true
d. false

26. What is the output of the following snipped code?

```
int a = 10;
int b = 10;
a+=10;
b=a++;
a++;
b--;
System.out.printf(a + " " + b);
```

a. 22 19
b. 21 20
c. 22 21
d. 21 19

27. Which of the following is **not** a loop requirement?

a. The initial value of the control variable
b. A control variable
c. The end value of the control variable
d. The loop-continuation condition that determines if looping should continue

28. What is the output of the following snipped code?

```
int d = 1;
while (d <= 10 )  {
    System.out.printf("%d ", d);
    d+=2;
}
System.out.println();
```

a. 1 3 5 7 9
b. 2 4 6 8 10
c. 2 4 6 8
d. 2 10

29. What is the output of the following snipped code?

```
for (int i=2;i<=5;i++)
   if (i>5)
         break;
   else
      System.out.print("A");
```

a. AAAA
b. 2 3 4 5
c. 5
d. A

30. Which of the following codes allows to print the below pattern?

```
*
**
***
****
```

a.
```
for(int a=5;a<=8;a++){
    for(int b=5;b<=a;b++)
        System.out.print("*");
    System.out.println();}
```

b.
```
for(int a=5;a<=8;a++){
    for(int b=5;b<=8;b++)
        System.out.print("*");
    System.out.println();}
```

c.
```
for(int a=1;a<=4;a++){
    for(int b=1;b<=4;b++)
        System.out.print("*");
    System.out.println();}
```

d.
```
for(int a=1;a<=4;a++){
    System.out.println("*");
```

2) Answer the following questions.

a) Write a complete java program to check weather an integer entered by the user is odd or even. (**hint**: the remainder of dividing an even numbe by 2 is always 0).

Example of the output

```
Enter a number: 3
3 is an odd number
```

b) What is the output of the following code fragments?

```
int a = 2 + 10 / 2 % 5;
int b = 4 + 12 / 2 ;
int c = 5;
System.out.println("a = " +a);
System.out.println("b = "+b);
System.out.println("c = " +c);

a = 21;
b = 101;
c = 51;


if(b > a || a > c)
 System.out.print("Welcome");
if( c < b++)
 System.out.println(" to OOP exam!");
else
 System.out.println(" to java programming");

if( a++ >b && a< c)
 System.out.print("&&&");
else if (!(b== c))
System.out.print("***");
else
System.out.print("---");
```